

FILLING AND WRAPPING	Problem Number	Points Earned	Points Possible	Percent Score	Achieved Scale Score
I can identify the dimensions of a rectangular prism.	1		1		<input type="checkbox"/> 2
I can calculate the surface area and volume of a prism. I can determine when you need to find volume and when you need to find surface area.	2-9		19		<input type="checkbox"/> 3
I can calculate the radius or diameter of a circle.	10-11		2		<input type="checkbox"/> 3
I can find the circumference and area of a circle.	12-17		10		<input type="checkbox"/> 3
I can calculate the surface area and volume of a cylinder.	18-19		6		<input type="checkbox"/> 3
I can calculate the volume of cones and spheres.	20-21		2		<input type="checkbox"/> 3

The cargo boxcar train pictured below is shaped like a rectangular prism. The dimensions of this part of the train are 12 *feet* tall, 50 *feet* long, and 10 *feet* wide.

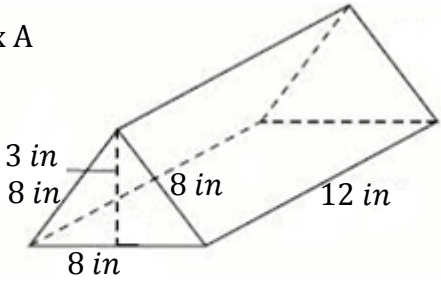
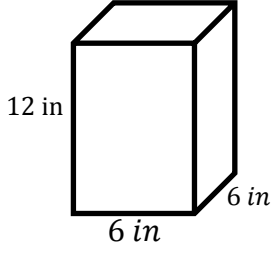
1. Label the train with the dimensions. (1 point)



2. How much cargo will fit inside the train? Show all work. (1.5 points)

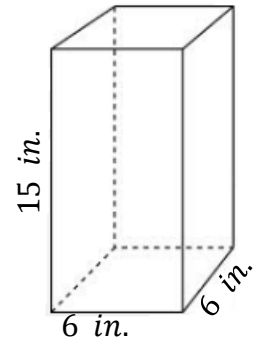
3. How much metal was used to construct this entire cargo boxcar? Show all work. (1.5 points)

A cereal company is selling their new cereal, Math Rocks, in two different shaped boxes, pictured below.

<p>Box A</p> 	<p>Box B</p> 
<p>4. How many <i>square inches</i> of cardboard are needed to make Cereal Box A? (3 points)</p>	<p>5. How many <i>square inches</i> of cardboard are needed to make Cereal Box B? (3 points)</p>
<p>6. How many <i>cubic inches</i> of cereal will fit in Box A? (3 points)</p>	<p>7. How many <i>cubic inches</i> of cereal will fit in Box B? (3 points)</p>

The cereal company also decides to sell a family-size box as pictured below.

8. What is the surface area of the family size box? (2 points)



Family-Size Box

9. What is the volume of the family size box? (2 points)

10. The diameter of a circle is 7 *cm*. What is the radius? (1 point)

11. The circumference of a carousel is about 188.4 *inches*. What is the diameter? (1 point)

A pizzeria sells a round pizza with diameter of 8 inches and a square pizza with side lengths of 6.28 inches.

12. Draw and label a picture. (1 point)

Round pizza

Square pizza

13. Which of the two shapes give you more pizza? Show your work. (3 points)

Which pizza has more pizza? _____

14. Which has more crust along the outside edge of the pizza? Show your work. (3 points)

Which pizza has more crust? _____

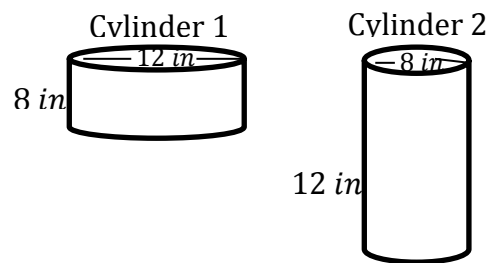
Griffin is putting together a circular train track with a diameter of 3 *feet*.

15. Draw and label a picture. (1 point)

16. How long is the train track? Show your work. (1 point)

17. How many square feet of space does Griffin need to build his circular track? Show your work. (1 point)

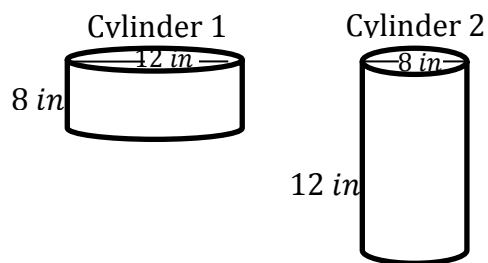
At the right are scale drawings of two cylinders. One cylinder has a diameter of 12 *in* and a height of 8 *in*. The other cylinder has a diameter of 8 *in* and a height of 12 *in*.



18. Do these cylinders have the same volume? Show all supporting work below. (3 points)

Cylinder 1:	Cylinder 2:
Do these cylinders have the same volume? _____	

19. Do the cylinders have the same surface area? Show all supporting work below. (3 points)

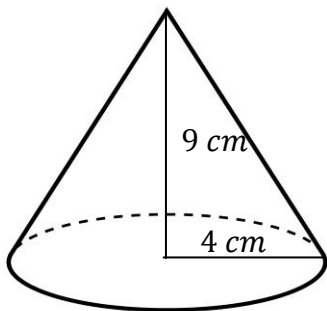


Cylinder 1:

Cylinder 2:

Do these cylinders have the same surface area? _____

20. Find the volume of the cone. Show your work. (1 point)



21. Find the volume of the sphere. Show your work. (1 point)

